

AMENDMENTS TO THE CLAIMS:

1.-3. (Canceled)

4. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the first cladding layer is a P cladding layer and the second cladding layer is an N cladding layer, and the first electrode is a P electrode and the second electrode is an N electrode.

5. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the first cladding layer is an N cladding layer and the second cladding layer is a P cladding layer, and the first electrode is an N electrode and the second electrode is a P electrode.

6. (Currently amended) A ~~The~~ light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the portion of the ~~leg~~ projection of the first electrode is spaced apart from one of the portions of the two ~~legs~~ projections of the second electrode in substantially equal distance along the portion of the ~~leg~~ projection of the first electrode and the portion of the ~~leg~~ projection of the second electrode.

7. (Currently amended) A ~~The~~ light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the portions of the ~~legs~~ projections of the first and second electrodes are substantially straight.

8. (Currently amended) ~~A~~ The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the portion of the ~~leg~~ projection of the first electrode ~~is~~ includes a straight arm and at least one of the portions of the ~~legs~~ projections of the second electrode ~~are~~ is curved.

9. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the portion of the ~~leg~~ projection of the first electrode ~~is straight~~ includes a straight arm and at least one of the portions of the ~~legs~~ projections of the second electrode ~~are~~ is angled.

10. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first

direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the ~~second~~ straight arm of the first electrode ~~includes a straight arm that branches into~~ curved segments, the curved segments which are disposed on either side of one of the projections including the portions of the two legs of the second electrode.

11. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the straight arm of the first ~~second~~ electrode ~~includes a straight arm that branches into~~ angled segments, the angled segments which are disposed on either side of one of the projections including the portions of the two legs of the second electrode.

12.-13. (Canceled)

14. (Currently amended) A The light-emitting diode of claim 1, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein one of the leg projections of the first second electrode has an enlarged portion at an end of the leg thereof.

15. (Original) The light-emitting diode of claim 14, wherein the enlarged portion has a circular shape.

16. (Original) The light-emitting diode of claim 14, wherein the enlarged portion has a square shape.

17. (Currently amended) The A light-emitting diode of claim 14, comprising:
a substrate;
a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;
a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the leg projection of the first electrode further comprises an enlarged portion at an end thereof an extension from the enlarged portion.

18. (Currently amended) The light-emitting diode of claim + 17, wherein the ~~leg projection~~ of the ~~first second~~ electrode includes an extension from the enlarged portion ~~have enlarged portions at respective ends of the legs.~~

19. (Currently amended) The light-emitting diode of claim 18, wherein the enlarged ~~portions~~ have portion has a circular shapes shape.

20. (Currently amended) The light-emitting diode of claim +8 14, wherein ~~the legs~~ another of the projections of the second electrode further ~~comprise respective~~ comprises extensions from the enlarged ~~portions~~ portion.

21. (Canceled)

22. (Currently amended) A The light-emitting diode of claim 21, comprising:

a substrate;

a light-emitting structure disposed above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

a first electrode in contact with the first cladding layer of the light-emitting structure, the first electrode having a projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

a second electrode in contact with the second cladding layer of the light-emitting structure, the second electrode having at least two projections extending in a second direction opposite the first direction along the horizontal axis, a portion of the projection of the first electrode disposed between and spaced apart from respective portions of the two projections of the second electrode;

wherein the first electrode includes an additional projection extending in the first direction, and the second electrode includes a third projection extending in the second direction, and the two projections of the first electrode are disposed between the three projections of the second electrode;

wherein the ~~two outer~~ three legs projections of the second electrode and the two projections of the first electrode are substantially straight.

23. (Currently amended) The light-emitting diode of claim 22, wherein ~~the two outer legs~~ projections of the three projections of the second electrode each have respective enlarged portions along the ~~legs~~ projections.

24. (Original) The light-emitting diode of claim 23, wherein the enlarged portions have semicircular shapes.

25. (Currently amended) The light-emitting diode of claim 21, wherein the two ~~outer legs~~ projections of the first electrode are curved.

26. (Currently amended) The light-emitting diode of claim 21, wherein the two ~~outer legs~~ projections of the first electrode are angled.

27-62 (Canceled)

63. (Currently amended) A method of making a light-emitting diode, the method comprising:

providing a substrate;

forming a light-emitting structure above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

forming a first electrode above the light-emitting structure along the vertical axis, the first electrode coupled to the first cladding layer of the light-emitting structure, the first electrode having a ~~leg~~ projection extending in a first direction along a horizontal axis perpendicular to the vertical axis; and

forming a second electrode on an exposed surface of the second cladding layer, the second electrode having two ~~legs~~ projections extending in a second direction opposite the first direction along the horizontal axis, wherein a portion of the ~~leg~~ projection of the first electrode is disposed between and spaced apart from respective portions of the two ~~legs~~ projections of the second electrode.

64. (Original) The method of claim 63, further comprising forming a thin metal layer above the light-emitting structure along the vertical axis and in contact with the light-emitting structure.

65. (Original) The method of claim 64, wherein the first electrode extends through the thin metal layer along the vertical axis to define a first elevation, and the second electrode defines a second elevation lower than the first elevation.

66. (Currently amended) The method of claim 63, wherein the portion of the ~~leg~~ projection of the first electrode is straight, and the portions of the two ~~legs~~ projections of the second electrode are at least one of straight, curved and angled.

67. (Currently amended) The method of claim 63, wherein the portion of the ~~leg~~ projection of the first electrode is tapered in the first direction.

68. (Currently amended) The method of claim 63, wherein the portions of the ~~legs~~ projections of the second electrode are tapered in the second direction.

69. (Currently amended) The method of claim 63, wherein the ~~leg~~ projections of the first electrode has an enlarged portion at end of the ~~leg~~ projection.

70. (Currently amended) The method of claim 63, wherein the ~~legs~~ projections of the second electrode have enlarged portions at ends of the ~~legs~~ projections.

71. (Currently amended) The method of claim 63, further comprising forming a plurality of channels within a surface region defined by the ~~leg~~ projection of the first electrode and the ~~legs~~ projections of the second electrode, the surface region being divided into sub-regions by the channels.

72. (Currently amended) A method of making a light-emitting diode, the method comprising:

providing a substrate;

forming a reflective layer below the substrate;

forming a light-emitting structure above the substrate along a vertical axis, the light-emitting structure including a first cladding layer and a second cladding layer;

forming a thin metal layer above the light-emitting structure along the vertical axis and coupled to the light-emitting structure;

etching the thin metal layer to define a first opening in the thin metal layer exposing a portion of the first cladding layer of the light-emitting structure;

coupling a first electrode to the first cladding layer via the first opening, the first electrode comprising a plurality of legs projections extending in a first direction along a horizontal axis perpendicular to the vertical axis;

etching the light-emitting diode to define a second opening exposing a portion of the second cladding layer of the light-emitting structure; and

coupling a second electrode to the second cladding layer via the second opening, the second electrode comprising a plurality of legs projections extending in a second direction opposite the first direction along the horizontal axis, the legs projections of the first electrode interspersed with and spaced apart from the legs projections of the second electrode.

73. (Original) The method of claim 72, wherein the first electrode defines a first elevation along the vertical axis, and the second electrode defines a second elevation, the second elevation being lower than the first elevation.

74. (Currently amended) The method of claim 72, wherein the legs projections of the first electrode are at least one of straight, curved and angled, and the legs projections of the second electrode are at least one of straight, curved and angled.

75. (Currently amended) The method of claim 72, wherein the ~~legs~~ projections of the first electrode are tapered in the first direction.

76. (Currently amended) The method of claim 72, wherein the ~~legs~~ projections of the second electrode are tapered in the second direction.

77.- 79. (Canceled)